What is claimed is:

1. A nucleic acid construct for post-transcriptional control of expression of a protein in a eucaryotic cell, wherein said construct encodes an mRNA corresponding to said protein, and said mRNA comprises a metabolite responsive instability element, whereby post-transcriptional stability of said mRNA is controlled by the metabolic substance or an analogue thereof.

2. The construct of claim 1 wherein the metabolite responsive instability element comprises the sequence TAACTCTGAATTTTTAAAACCCGAAGTCAAGAGCTAGTA.

3. The construct as in claim 1 wherein the metabolic substance is glucose, 3-O-methylglucose, 2-deoxyglucose, or combinations thereof.

4. The construct as in claim 1 wherein said nucleic acid is a plasmid.

5. The construct as in claim1 wherein said nucleic acid is a virus.

6. The construct as in claim1 wherein said nucleic acid is a retrovirus.

7. The construct as in claim 1 wherein said nucleic acid is a naked DNA.

8. A transgenic animal comprising the construct of claim1.

9. The animal of claim 8 wherein said animal is a mouse.

10. An antisense nucleic acid or analogue that is complementary to the nucleic acid sequence TAACTCTGAATTTTTAAAACCCGAAGTCAAGAGCTAGTA.

11. An antisense nucleic acid or analogue that is complementary to at least 15 consecutive base pairs of the nucleic acid sequence TAACTCTGAATTTTTAAAACCCGAAGTCAAGAGCTAGTA.

12. A method for controlling expression of a gene in a eucaryotic cell, comprising inserting a metabolite responsive instability element into said gene, whereby post-transcriptional stability of mRNA is controlled by the metabolic substance or an analogue thereof.

13. The method as in claim 12, wherein said metabolite responsive instability element comprises the sequence TAACTCTGAATTTTTAAAACCCGAAGTCAAGAGCTAGTA.

14. The method as in claim 12, wherein said metabolic substance is glucose, 3-O-methylglucose, 2-deoxyglucose, or mixtures thereof.

15. A method for treating vascular disease comprising inserting the construct of claim 1 into at least one cell of a patient.

16. A method for treating cancer comprising inserting the construct of claim 1 into at least one cell of a patient.

17. A method for treating hypertension comprising inserting the construct of claim 1 into at least one cell of a patient.

18. A method for treating atherosclerosis comprising inserting the construct of claim 1 into at least one cell of a patient.

19. A method of screening for mutations of the metabolite responsive instability element of claim1 comprising:
obtaining a DNA sample from a patient; and
sequencing said metabolite responsive instability element, and
detecting mutations within said metabolite responsive instability element.

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20. A recombinant cell comprising the construct of claim 1.

21. A primer comprising a nucleic acid capable of recognizing and binding the metabolite responsive instability element of claim 1.

22. A kit for detecting the metabolite responsive instability element of claim 1, which comprises multiple containers wherein each of the separate containers comprise:
a set of primers for PCR detection of said metabolite responsive instability element, and optionally a positive control comprising the metabolite responsive instability element DNA.

23. A nucleic acid probe comprising a DNA sequence having affinity for the DNA sequence of the metabolite responsive instability element of claim 1.

24. A host cell comprising the nucleic acid of claim 1, in which said nucleic acid is isolated and purified.

25. A replicable vector comprising the nucleic acid construct of claim1.

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